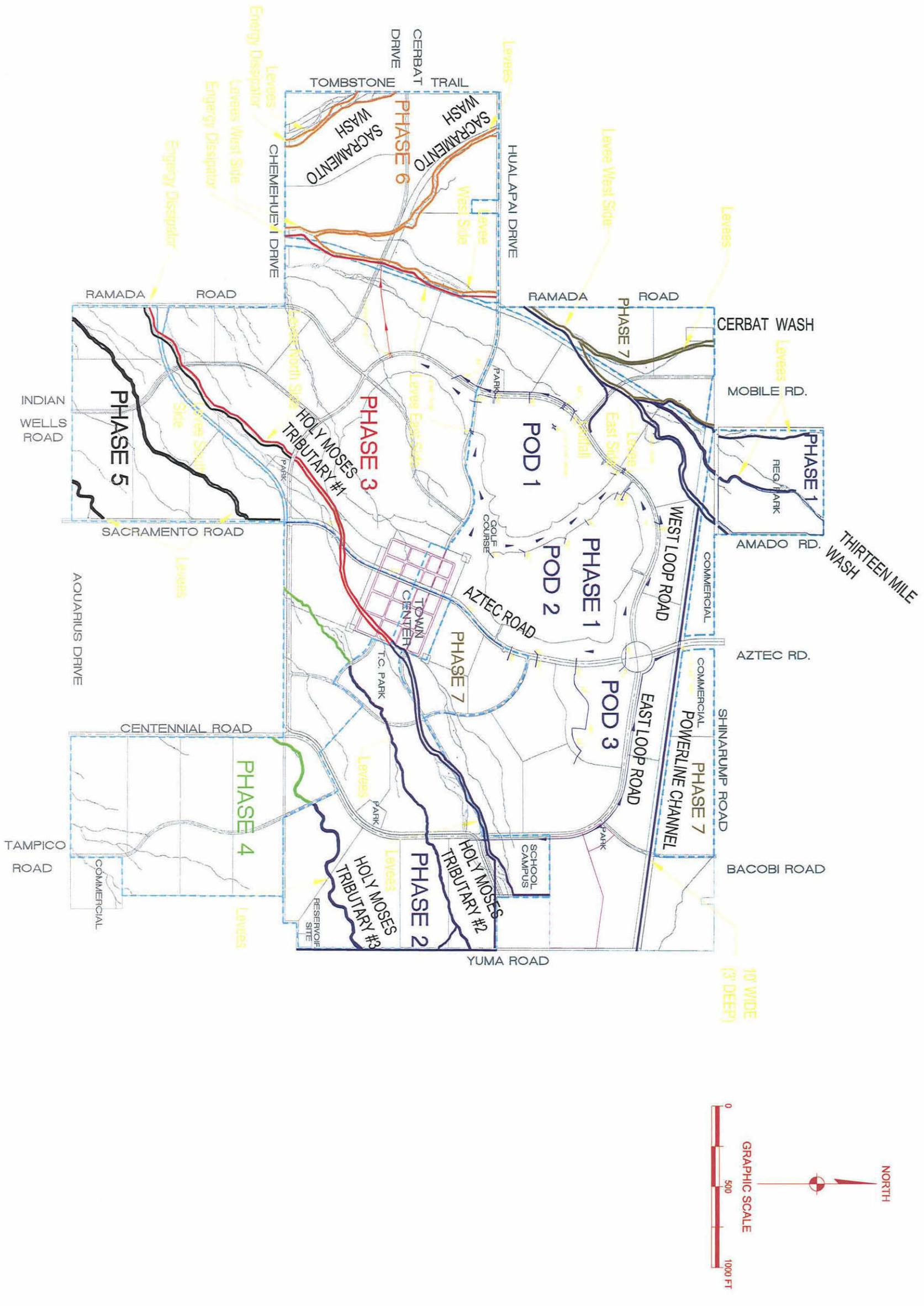


## FIGURE 10 - GV RANCH STORM WATER COLLECTION SYSTEM OVERVIEW

## FIGURE 10 - GV RANCH



Holy Moses Wash. These washes are all tributaries to the Sacramento Wash which enters the project site on the western boundary and exits at the southern boundary. The proposed storm drainage system is a separate system from the sanitary sewer system and maintains the historic flow patterns while routing flows away from the sanitary sewer collection or treatment facilities. Please refer to Figure 10, "GV Ranch Stormwater Collection System Overview".

The north and northeast portions of the project site drain by way of surface facilities to the Powerline Channel, then west to the Thirteen Mile Wash. Pod 3 drains into 42-inch and 54-inch pipes that cross Aztec Road and drain into the depressed golf course.

Pod 2 likewise drains into the golf course. Pod 1 drains to three collection points to a storm drain system in West Loop Road. This drainage system with a maximum pipe size of 84-inches drains into the golf course. The depressed golf course serves as a detention basin to reduce flows back to the predevelopment condition. Flows from the golf course are conveyed by culverts and open channels to the Cerbat and Sacramento Washes.

The western and southern portions of the site, including the Town Center, will drain by separate facilities to the tributaries of the Holy Moses Wash.

**Pretreatment Requirements.** There will be no required pretreatment of residential sewage. Commercial and industrial pretreatment requirements will meet 40 CFR Part 403 as enforced by ADEQ, as well as other state and local requirements in place at the time the owner of the establishment applies for the building permit for the facility. PMUC staff will coordinate with the County building department as part of their pretreatment program duties. These requirements will also be provided at the time the owner of the facility applies for a sewer connection. The City of Kingman will be expected to adhere to these requirements as a condition of PMUC accepting sewage from the Downtown WWTP.

### Design and Construction Scheduling

**Interim WWTP.** The interim WWTP is under the following design and construction schedule:

1. Design and permit submission– ongoing, completion date of September 2006.
2. Equipment procurement – Starting July 2006.
3. Construction – Starting October 2006.
4. Substantial Completion/WWTP startup – March 2007.

This schedule is designed to have the interim WWTP ready for service prior to the closing of the first residential unit. As such, there will be no septic systems in GV Ranch.

Construction priorities for the interim WWTP include procurement of the process equipment, approval of the 208 plan amendment, approval of the APP, AZPDES and Reuse permits, and completion of the development infrastructure (water, sewer and electric utilities, in particular) so that the WWTP can have a potable water supply, a means to convey the sewage from the homes to the plant, and a power supply for the equipment and controls.

**Permanent WWTP.** Phase 1 of the permanent WWTP (1 mgd capacity) is under the following design and construction schedule:

1. Design and permit submission– Starting in July 2006, complete in January 2007.
2. Equipment procurement – Starting October 2006.
3. Construction – Starting January 2007.
4. Substantial Completion/WWTP startup – December 2007.

This schedule is designed to have the permanent WWTP ready for service prior to the interim WWTP reaching 80% of its rated design capacity. This schedule reinforces the “no septic tank” philosophy of GV Ranch.

At this time, the project priority is to begin the design process on schedule. Submission of the APP, AZPDES and Reuse permits for this facility will be a top design priority. The main construction priority is similar to the interim WWTP – complete the development infrastructure (water, sewer and electric utilities, in particular) so that the WWTP can have a potable water supply, a means to convey the sewage from the homes to the plant, and a power supply for the equipment and controls.

Future phases of WWTP Design and Construction are listed below. These are based on an average housing absorption rate of 50 homes per month, and the wastewater and land use assumptions included in this document.

- Phase 2 – 2 mgd upgrade, capacity to 3 mgd – January 2009 to September 2010
- Phase 3 – 2 mgd upgrade, capacity to 5 mgd – April 2017 to December 2018
- Phase 4 – 2 mgd upgrade, capacity to 7 mgd – April 2028 to December 2029
- Phase 5 – 2.4 mgd upgrade, capacity to 9.4 mgd – April 2040 to December 2041

### Permitting Requirements

Both the interim and permanent WWTPs will require the following permits:

1. Mohave County 208 Plan Amendment (this document).
2. Aquifer Protection Permit (APP).
3. Arizona Permit Discharge Elimination System Permit (AZPDES) for sewage discharge.
4. ADEQ Individual Reclaimed Water Permit.
5. Mohave County Building Permit.
6. ADEQ Air Quality permit.
7. AZPDES Stormwater Pollution Prevention Permit (contractor to obtain)
8. Dust Control Plan for construction (contractor to submit).

A copy of the July 2005 meeting notes discussing permitting is included in Appendix C.

**Mohave County 208 Plan Amendment.** The GV Ranch development represents the first major plan amendment since the Mohave County 208 Plan was approved in December 2003. Rhodes and Mohave County are using this document to move the plan approval process forward. ADEQ approval is anticipated by October 2006.

**Aquifer Protection Permit.** The State Aquifer Protection Permit (APP) Program was established by the Environmental Quality Act and serves to regulate WWTPs that will

discharge to the local aquifer. The interim WWTP will process less than 250,000 gpd, and will follow a streamlined approval process in accordance with ADEQ guidelines for facilities that process less than 250,000 gpd. The application for the interim WWTP was submitted on February 3, 2006 and currently is defined as "administratively incomplete" because the 208 Plan Amendment has not been approved.

The APP for the permanent WWTP will require proof of Best Available Demonstrated Control Technology (BADCT), as defined in the ADEQ BADCT guidance documents. The APP application for the permanent WWTP is scheduled for submission in Fall 2006.

**AZPDES for Sewage Discharge.** An AZPDES permit for sewage discharge is required for both WWTPs due to potential discharge into a tributary of Thirteen Mile Wash.

Figure 10 shows the location of the discharge point for the interim WWTP. The AZPDES permit application for the interim WWTP will be submitted in July 2006.

The discharge location for the permanent WWTP will be defined during the detailed design of the WWTP. The AZPDES permit application for the Permanent WWTP will be submitted in Fall 2006.

**ADEQ Individual Reclaimed Water Permit.** An individual reclaimed water permit is required for both WWTPs due to the use of reclaimed water for golf course irrigation. The application for the interim WWTP is scheduled for submittal in July 2006. The application for the permanent WWTP is scheduled for a Fall 2006 submittal. Figure 6 shows the discharge point to the golf course irrigation system. This discharge point will be the same for both WWTPs.

**Mohave County Building Permit.** A Mohave County Building permit is required for both WWTPs, as both WWTPs will have some type of habitable structure at the site. For the interim WWTP, Rhodes will coordinate with the appropriate Mohave County department, obtain exactly what is required for the submittal, and submit the permit information by July 2006. The application for the permanent WWTP is scheduled for a Fall 2006 submission.

**ADEQ Air Quality Permit.** An ADEQ air quality permit will be required for the permanent WWTP. The main parameters to be regulated will be odor emissions and the emissions from the on-site generator. This permit is scheduled for a Fall 2006 submittal.

The interim WWTP will not require an air quality permit. The plant complies with the 1,000 foot buffer zone required of WWTPs that have no formal odor control system, and the emergency generator can be exempted since it will be smaller than 300 bhp in output.

**AZPDES Stormwater Pollution Prevention Permit (contractor to obtain).** The Contractor will have to submit an AZPDES Stormwater Pollution Prevention Permit (SWPPP) for both WWTPs. The intent of this permit is to verify that the Contractor conforms with appropriate measures to contain and treat (if necessary) stormwater runoff that occurs during the construction process. The Contractor must submit this plan prior to starting site work for both WWTPs. They must coordinate with ADEQ's permit section to construct the WWTPs.

**Dust Control Plan (contractor to submit for review).** The Contractor is required to submit a dust control plan to the construction administrator for review and approval for both WWTPs. There is no formal permitting process for dust control in Mohave County, but the Contractor must submit an internal plan and must follow the plan during the construction process. Water or other dust control materials must be available on-site at all times.

### Project Financing and Cost Opinions

Both the interim WWTP and the first phase of the permanent WWTP are being privately financed by Rhodes. Rhodes will turn the facilities over to the PMUC for operation and maintenance upon operational acceptance of the WWTPs. Rhodes will finance future phases of the permanent WWTP and will turn those phases over to PMUC for operation and maintenance, as well. The consolidated financial statement for Sagebrush Enterprises, Inc. and Subsidiaries (Rhodes' parent company) is included in Appendix D. Rhodes has filed the required financial information for the formation of the PMUC with the ACC. This information details the expected financial operation of the company for the first five years of operation. This information is included in Appendix D.

Project construction cost opinions are detailed in Table 5 below. All costs are in 2006 dollars.

**TABLE 5**  
**GV RANCH INTERIM AND PERMANENT WWTPs**  
**CONSTRUCTION COST OPINIONS**

<b>INTERIM WWTP (240,000 gpd)</b>	
Construction Schedule	October 2006 – March 2007
Construction Cost	\$ 2,900,000
Admin, O&M, Insurance + Contingency (20%)	\$ 580,000
Total Cost	\$ 3,480,000
<b>PERMANENT WWTP, PHASE I (1 mgd)</b>	
Construction Schedule	January 2007 – December 2007
Construction Cost (\$11.5/gal)	\$ 11,500,000
Admin, O&M, Insurance + Contingency (35%)	\$ 4,000,000
Total Cost	\$ 15,500,000
<b>PERMANENT WWTP, PHASE 2 (3 mgd)</b>	
Construction Schedule	September 2009 – September 2010
Construction Cost (\$6.5/gal)	\$ 13,000,000
Admin, O&M, Insurance + Contingency (35%)	\$ 4,500,000
Total Cost	\$ 17,500,000
<b>PERMANENT WWTP, PHASE 3 (5 mgd)</b>	
Construction Schedule	January 2018 – December 2018
Construction Cost (\$8.5/gal)	\$ 17,000,000
Admin, O&M, Insurance + Contingency (35%)	\$ 6,000,000
Total Cost	\$ 23,000,000
<b>PERMANENT WWTP, PHASE 4 (7 mgd)</b>	
Construction Schedule	January 2029 – December 2029
Construction Cost (\$5.5/gal)	\$ 11,000,000
Admin, O&M, Insurance + Contingency (35%)	\$ 3,850,000
Total Cost	\$ 14,850,000

<b>PERMANENT WWTP, PHASE 5 (9.4 mgd)</b>	
Construction Schedule	January 2041 – December 2041
Construction Cost (\$4.5/gal)	\$ 10,800,000
Admin, O&M, Insurance + Contingency (35%)	\$ 3,800,000
Total Cost	\$ 14,600,000

### Project Impacts and Benefits

The GV Ranch project will impact the Golden Valley/Kingman Area of Mohave County in many ways. These impacts are listed below.

***The Project will Increase the Mohave County Tax Base.*** The housing and commercial components of the project will add to the Mohave County tax base without costing the County capital for construction, as Rhodes is financing the infrastructure development and construction.

***Master Planned Community Prevents Haphazard Development.*** The GV Ranch community will be master planned, with all community development aspects being approved by Mohave County in accordance with the County's general plan. This will prevent wildcat or haphazard development of the area and add the first "destination" style community to the region.

***Recreational Opportunities will be Added to the Region.*** GV Ranch will add a 155 acre regional park, an 18 hole championship golf course, and a Town Center shopping, dining and entertainment district to a region that has few recreational and entertainment opportunities within 30 minutes' drive.

***Use of Reclaimed Water for Irrigation.*** The use of reclaimed water for irrigation in the GV Ranch community will minimize the use of the groundwater resource. The interim WWTP is expected to be able to essentially deliver all of its treated wastewater to the golf course irrigation system. As the development grows and the permanent WWTP comes on line, the treated wastewater volume delivered to the golf course irrigation system will be sufficient to irrigate the golf course year round, thus eliminating the use of groundwater for irrigation. In addition, irrigation of the parkland green space in GV Ranch with reclaimed water will allow for the full use of these amenities without additional depletion of the groundwater resource.

***Potential Improvement to the Kingman Wastewater System.*** The City of Kingman and Rhodes are negotiating for Kingman to route up to 250,000 gpd of flow from its Downtown WWTP to the GV Ranch permanent WWTP. In anticipation of a successful negotiation, this flow has already been included in the implementation schedule for the permanent WWTP. This would have the benefit of removing an operationally challenged plant from the Kingman system, thus improving regional water quality. An additional benefit could be to provide a significant base flow to the first phase of the permanent WWTP, which would eliminate operational concerns of low flows and allow for quicker decommissioning of the interim WWTP.